

CLAIMS

What is claimed is:

1. A method, comprising:

requesting to access a hardware device of a computer system during operating system (OS) runtime of an operating system executing on the computer system;

finding a pre-boot driver for the hardware device by the computer system; and

accessing the hardware device during the OS runtime using the pre-boot driver.
2. The method of claim 1, further comprising advertising the pre-boot driver in a data structure by firmware of the computer system, the pre-boot driver to be available to the operating system during OS runtime.
3. The method of claim 2 wherein finding the pre-boot driver comprises searching for the pre-boot driver in the data structure.
4. The method of claim 2 wherein the data structure is compatible with firmware that operates in accordance with an Extensible Firmware Interface (EFI) framework standard.

5. The method of claim 1 wherein accessing the hardware device comprises executing a pre-boot driver image of the pre-boot driver in a pre-boot driver interpreter operating in the operating system environment.
6. The method of claim 5 wherein the pre-boot driver image includes interpreted code to allow management of the pre-boot driver image one op-code at a time.
7. The method of claim 5 wherein the pre-boot driver interpreter is operated in a pre-boot emulator to emulate the pre-boot environment of the computer system.
8. ____ The method of claim 5, further comprising stopping execution of the pre-boot driver image if the pre-boot driver image attempts to violate a policy condition of the operating system.
9. The method of claim 1 wherein the pre-boot driver comprises an EFI Byte Code (EBC) image for the hardware device.
10. The method of claim 1, further comprising accessing the hardware device using an OS native driver for the hardware device if the OS native driver is available to the operating system.

11. The method of claim 1, further comprising loading a pre-boot driver image of the pre-boot driver into a memory device of the computer system during a pre-boot phase of the computer system.

12. An article of manufacture comprising:

a machine-readable medium including a plurality of instructions which when executed perform operations comprising:

discovering a pre-boot driver of a hardware device during a pre-boot phase of a computer system;

loading a pre-boot driver image corresponding to the pre-boot driver into a memory device of a computer system; and

advertising the pre-boot driver in a data structure of the computer system, the data structure available to an operating system of the computer system during OS runtime.

13. The article of manufacture of claim 12 wherein discovering the pre-boot driver comprises initializing a hardware device during the pre-boot phase having stored the pre-boot driver.

14. The article of manufacture of claim 12 wherein the hardware device comprises a non-volatile storage device to store the pre-boot driver.

15. The article of manufacture of claim 12 wherein the pre-boot driver image comprises an interpreted pre-boot driver image.

16. The article of manufacture of claim 12 wherein the plurality of instructions to operate in accordance with an Extensible Firmware Interface (EFI) framework standard.

17. The article of manufacture of claim 12 wherein the data structure is compatible with an Extensible Firmware Interface (EFI) framework standard.

18. An article of manufacture comprising:

a machine-readable medium including a plurality of instructions which when executed perform operations comprising:

receiving a request from an application executing on the computer system to access a hardware device of the computer system;

finding a pre-boot driver for the hardware device advertised in a data structure of the computer system; and

executing a pre-boot driver image corresponding to the pre-boot driver via a pre-boot driver interpreter during operating system runtime.

19. The article of manufacture of claim 18 wherein receiving the request comprises receiving an Application Program Interface (API) call from the application.

20. The article of manufacture of claim 18 wherein the pre-boot driver image comprises an interpreted pre-boot drive image to enable access to the hardware device.

21. The article of manufacture of claim 18 wherein the data structure compatible with an Extensible Firmware Interface (EFI) framework standard.

22. The article of manufacture of claim 18 wherein the pre-boot interpreter to enable managed execution of the pre-boot driver image, wherein the pre-boot driver image includes interpreted code.

23. The article of manufacture of claim 22 wherein execution of the plurality of instructions further perform operations comprising stopping execution of the pre-boot driver image if the pre-boot driver image attempts to violate a policy condition of the computer system.

24. The article of manufacture of claim 18 wherein execution of the plurality of instructions further perform operations comprising executing a native driver for the hardware device if the native driver for the hardware device is available.

25. A computer system, comprising:
a processor;
an expansion board operatively coupled to the processor; and

at least one flash device operatively coupled to the processor, the at least one flash device including firmware instructions which when executed by the processor perform operations comprising:

initializing the expansion board during a pre-boot phase of the computer system, the expansion board storing a pre-boot driver comprising a pre-boot driver image for the expansion board;

loading the pre-boot driver image into a memory device of the computer system during the pre-boot phase; and

advertising the pre-boot driver in a data structure of the computer system to indicate the location of the pre-boot driver image in the memory device.

26. The computer system of claim 25 wherein the firmware instructions to operate in accordance with an Extensible Firmware Interface (EFI) framework standard.

27. The computer system of claim 25 wherein the pre-boot driver image comprises an EFI Byte Code (EBC) image for the expansion board.

28. The computer system of claim 25 wherein the data structure compatible with an Extensible Firmware Interface (EFI) framework standard.